News

Meetings

ACH/ALLC–1990 and 1991

"The New Medium" was the title of the joint meeting of the International Association for Literary and Linguistic Computing (its 17th) and the International Association for Computers and the Humanities (its 10th) held at the University of Siegen, Germany, from June 4-9, 1990. While no sessions on music were scheduled, there were several on manuscript studies, including "Early Manuscripts--Documentation and Information Exchange via Computer," chaired by Menso Folkerts of the Deutsches Museum in Munich, and "Medieval Manuscripts," chaired by Jacqueline Hamesse of the Université Catholique de Louvain.

Tempe, Arizona, will be the site of the 1991 joint meeting, "Making Connections." Arizona State University will serve as host institution for the event, scheduled for March 17-21. Enquiries may be addressed to Daniel Brink, Dept. of English, Arizona State University, Tempe, AZ 85287-0302.

AIM–1990

The fifth workshop on Artificial Intelligence and Music, scheduled for August 7 in Stockholm, was to include papers on cognitive musicology, expert systems, knowledge representation, neural computing, and AI-based tools for music research. Enquiries about the proceedings may be sent to Antonio Camurri (music@dist.dist.unige.it).

Increased participation by musicologists and ethnomusicologists is sought. For information about future workshops one may contact Mira Balaban, Gianni De Poli, Kemal Ebcioğlu, Goffredo Haus, Otto Laske, Marc Leman, or Christoph Lischka.

CMCCT–1990

A two-day meeting entitled "College Music Curriculum and Current Technology: Models for Application" took place at the University of Minnesota at Duluth on August 2-4, 1990. The keynote speakers were Fred T. Hofstetter (University of Delaware), chief architect of the Videodisk Music Series, and G. David Peters (CERL, University of Illinois), a co-author of the Schirmer book *Music Teaching and Learning*.

CMR–1991

A second conference on the use of computers in all branches of musical research is planned for the dates April 7-10 in Belfast, Northern Ireland. The meeting is modelled along the same lines as one held in Lancaster, England, in April 1988. Papers and software demonstrations are planned. For details, please contact Alan Marsden at the Department of Music, The Queen's University, Belfast BT7 1NN, Northern Ireland, UK.

ICMC–1990

Demonstration projects running on the Macintosh II, the Atari ST, and the Apollo and NeXT workstations were scheduled to take place at the International Computer Music Conference in Glasgow. The dates were September 10-15.

Among the papers scheduled were descriptions of the KANSEI Music System by Haruhiro Katayose and Seiji Inokuchi, of "Ensemble: An Object-Oriented Real-Time Performance System" by Lounette Dyer, "Pattern Matching as an Engine for the Computer Simulation of Musical Style" by David Cope, and "Conceptual Integrity in a Music Notation Interface" by Glendon Diener. A session was to be devoted to the use of computer music in developing the talents of the disabled.

Proceedings of the ICMC are available from the Computer Music Association, PO Box 1634, San Francisco, CA 94101-1634.

ICTM–1990

"Transcription of Traditional Music" was to be the theme of the study group on computer research, meeting under the auspices of the International Council for Traditional Music in Marseille, France, on September 29 and 30, 1990. Problems encountered in analysis and archiving of music in oral traditions are also frequently considered by the group. For information on the group's activities, please contact Helmut Schaffrath.

MIM–1990

"Musique et Assistance Informatique" was the title of the second international conference organized by the Laboratoire Musique et Informatique de Marseille and scheduled to take place between October 3 and 6. Papers and roundtables concerning compositional theory, modelling, musical representation, and other subjects were scheduled, and a software demonstration was planned. One of the scheduled talks was to be André Riotte's "Formalization and Mathematical/Computer Models of Musical Scores." Simultaneous translation into English or French was promised. Orders for the proceedings (in French) of the 1988 meeting, "Musical Structures and Information Technology," can be sent to Laboratoire MIM, 36 Bd Pardigon, F-13004 Marseille, France. The electronic address (Bernard Bel) is bel@frmop11.bitnet.

Music Publishing and Music Representation

An invited symposium on music publishing and music representation is currently being organized for the autumn of 1991 by John Chowning and Leland Smith at the Center for Computer Research in Music and Acoustics at Stanford University. Topics to be considered include on-demand publishing, interactive listening, audible scratch pads, optical scanning, and new domains of music research.

Periodicals

Array

Array, the quarterly newsletter of the Computer Music Association, has been expanded and upgraded with the Summer 1990 issue. Research notes, studio reports, and announcements of conferences, products, and publications are being sought for future issues. Submissions may be sent to Carla Scaletti (scaletti@novamail.cerl.uiuc.edu).

Computers in Music Research

Computers in Music Research is an annual publication first produced in the autumn of 1989 through the Wisconsin Center for Music Technology. Its editor is John William Schaffer. *CMR* carries articles, book reviews, research reports, and short news items. Many readers will find the seventeen-page bibliography appended to Bo Alphonce's retrospective article on "Computer Applications in Music Research" a helpfully concise resource. Individual subscriptions are $12, which may be sent to the Wisconsin Center for Music Technology, School of Music, University of Wisconsin, Madison, WI 53706.

EthnoForum

EthnoForum, a digest of information about work in ethnomusicology, is an online publication edited by Karl Signell at the Baltimore County campus of the University of Maryland. It carries timely and succinct notices about meetings, research projects, appointments, obituaries, and other items of professional and personal interest to ethnomusicologists. *EF* is well indexed and organized. Such finely crafted contributions as Mantle Hood's memorial and Jim Kippen's obituary for John Blacking, who died in January, rise far above the norm for electronic journalism. For details, send the message "GET WELCOME INFO" to LISTSERV@UMDD. Messages for inclusion may be sent to ETHMUS-L@UMDD with one of the following headers: DISCUSSION, NEWS, JOBS. Files for archiving may be sent to SIGNELL@UMDD.

Leonardo Music Journal

The editors of *Leonardo*, a journal devoted to the electronic arts, have announced the founding of a new *Leonardo Music Journal*. Annual publication will begin in 1991. Work combining the visual and sound arts will be of particular interest. For further information contact *Leonardo Music Journal*, Box 75, 1442A Walnut St., Berkeley, CA 94709.

MUSICUS

Musicus is the title of a semi-annual journal of computer-based music research published by the British Universities' Computers in Teaching Initiative designated Centre for Music (CTICM) at the University of Lancaster. Anthony Pople serves as editor. The journal concentrates on teaching applications and theories underlying them as well as curriculum issues. Lisa Whistlecroft's concise software directory (pp. 89-97) provides citations to reviews in the trade press.

The first issue carried three "user reports" on the music printing programs *HB Music Engraver*, *Professional Composer*, and *SCORE*. *Musicus* is distributed free of charge to all full-time academics in music departments in the UK. Others may subscribe for £10 a year. For further information please contact Lisa Whistlecroft (L.Whistlecroft@ lancaster.ac.uk), the assistant editor, at CTICM, University of Lancaster, Lancaster LA1 4YW, UK.

General Articles

"Databases and the Practice of Musicology" by Walter B. Hewlett and Eleanor Selfridge-Field and "Computer-Based Approaches to Musical Data and Musical Analysis" by Mario Baroni and Eleanor Selfridge-Field will appear in the second volume of the *Atti del XIV Congresso della Società Internazionale di Musicologia (Bologna 1987)*, edited by L. Bianconi, A. Gallo, A. Pompilio, and D. Restani. Publication by Edizioni di Torino (via Alfieri 19, I-10121 Turin, Italy) is scheduled for the end of 1990.

John Rahn writes on "Processing Musical Abstraction: Remarks on LISP, the NeXT, and the Future of Musical Computing" in *Perspectives of New Music*, 28/1 (1989), 180-191.

John Roeder describes "A General-Purpose Object System for Music Graphics" in the *Proceedings of the 1989 International Computer Music Conference* (San Francisco, 1989), pp. 260-3.

John William Schaffer discusses "Intelligent Tutoring Systems: New Realms in CAI?" in *Music Theory Spectrum* 12/2 (1990).

"Reflections on Technology and Musicology" is an article by Eleanor Selfridge-Field that prefaces a report of the International Musicological Society's Study Group on Musical Data in *Acta Musicologica* 52/3 (1990), the journal of the IMS published by Bärenreiter Verlag.

Software Catalogues

Association for Technology in Music Instruction

More than 600 items are listed in the catalogue of computer programs for music education edited by Charles Boody and others and distributed by the Association for Technology in Music Instruction. The catalogue is available for $15 from ATMI, ISD 270, Evaluation Center 246, 1001 Highway 7, Hopkins, MI 55343.

Digital Arts and Technologies

Digital Arts and Technologies, Inc (21 Glen Ridge Road, Mahopac, NY 10541) publishes an annual *Musician's Music Software Catalog*. A two-year subscription is available for $5 ($10 for overseas orders). The company also offers telephone consultation (914-638-7949) and toll-free ordering (800-332-2251).

Micro-Music

An extensive catalogue of music software for IBM PC compatibles, Macintosh, Atari, Amiga, and other microcomputers is available free from Micro Music, Inc., Pinetree Plaza #17, 5269 Buford Highway, Atlanta, GA 30340.

Books and Dedicated Issues of Journals

Advances in Computing in the Humanities

Goffredo Haus is the guest editor of the next issue of *Advances in Computing in the Humanities*, a special number on music applications. There are three main parts to the book—a section of tutorials, a section on music processing, and a section of studio reports. Contributions include articles on music description by Otto Laske, Marc Leman, Antonio Camurri, and the editor, as well as a consideration of "Music Analysis by Computer: Concepts and Issues" by Eleanor Selfridge-Field and several pieces on signal processing, composition, and computer music. *ACH* is published in Israel by JAI Press, Inc.

Artificial Intelligence and Music

Antonio Camurri has edited selected proceedings from the European Workshop on Artificial Intelligence and Music (Genoa, 1989) for publication in *Interface* 19(1990)/1-3. Contributions include "A Computer-Based Tutor for Beginning Piano Student" by R.

Dannenburg and colleagues, "An Expert System Prototype for the Study of Musical Segmentation" by Lelio Camilleri and others, "A Many-Sorted Approach to Musical Score Interpretation" by Gianni De Poli and others, and a review article on "The Role of Artificial Intelligence in Music Research" by the editor.

Computer Applications in Music

Deta Davis is drafting a supplement of 2000-3000 citations (through 1989) to her recently published bibliography *Computer Applications in Music*. The supplement is scheduled to be published by A-R Editions, Inc. (Madison, WI) in 1991.

Computers in Music

Helmut Schaffrath is the editor of *Computer in der Musik: Über den Einsatz in Wissenschaft, Komposition, und Pädagogik*. The work was scheduled for publication by Metzler in Stuttgart in September 1990. Its contents include "Sampling und Musik-Analyse" by Ugo Will, "Der Rechner in Notationsforschung und musikalischen Analyse" by Iannos Zannos, "Künstliche neuoronale Netzwerke: Neue Ansätze zur ganzheitlichen Informationsverarbeitung in der Musikforschung" by Marc Leman, two articles on algorithmic composition, two articles on MIDI applications, and a lead article, "Zu Einsatz von Computern in Musikwissenschaft und -pädagogik," by the editor. The price is DM 32 (discounted to DM 27 through December 1990).

IEEE Computer

The July 1991 issue of *IEEE Computer* will examine music applications (composition, synthesis, simulation, and tools for analysis) from a computational standpoint. An audio cassette may be provided with the issue. The editor of this issue is Denis Baggi, Istituto Dalle Molle, Corso Elvezia 36, CH-6900 Lugano, Switzerland.

Interactive Melodic Analysis

Barbara Jesser's Ph.D. thesis (Hochschule für Musik, Essen University, 1989) will be published by Peter Lang, Bern, in 1991 or 1992 under the title *Interaktive Melodieanalyse: Methodik und Anwendung computergestützter Analyseverfahren in Musikethnologie und Volksliedforschung: typologische Untersuchung der Balladensammlung des DVA*. In addition to describing her research on ballads, Jesser reviews theories of similarity, concepts of analysis appropriate to this repertory, and computer approaches to these tasks developed under the direction of Helmut Schaffrath at Essen University.

MIDI for the Atari ST

MIDI and Sound Book for the Atari ST by Bernd Enders and Wolfgang Klemme is available from M&T Books, 501 Galveston Dr., Redwood City, CA 94063. In addition to providing basic information about MIDI, the authors discuss programming for the Atari sound chip and other hardware-related information.

Modelling Music Cognition

Lelio Camilleri is compiling a special issue of the journal *Minds and Machines* (a journal of artificial intelligence, philosophy, and cognitive science) on the theme of modelling musical cognition. Contributors include Jamshed Bharucha, Kemal Ebcioğlu, Jim Kippen, Kate Stevens, Eero Tarasti, and the editor. The volume (2/2) is expected to appear early in 1992. *Minds and Machines* is published by Kluwer Academic Publishers.

Models of Musical Communication and Cognition

Marc Leman is the editor of *Models of Musical Communication and Cognition*, a dedicated issue (18/1-2) of *Interface* (ISSN 0303-3902), which is published by Swets and Zeitlinger B.V. The most substantial articles are Mira Balaban's "The Cross-Fertilization Relationship between Music and Artificial Intelligence," David Cope's "Experiments in Music Intelligence," and Leman's "Symbolic and Subsymbolic Information Processing."

Music and the Personal Computer

Music and the Personal Computer: An Annotated Bibliography by William J. Waters was published by Greenwood Press (ISBN 0-313-26790-1) in 1989. Products for the Amiga, Atari, Commodore, IBM PC, Macintosh, and Tandy computers are discussed.

The Musical Microcomputer

Craig Lister is the author of *The Musical Microcomputer: A Resource Guide* (New York, 1988). The publisher is Garland Press, 136 Madison Avenue, New York, NY 10016.

Pascal Programming for Music Research

Alexander Brinkman's *Pascal Programming for Music Research* (ISBN-0-226-07508-7) has recently been published by the University of Chicago Press. The work provides substantial coverage of Pascal programming in general and selective consideration of music codes (especially SCORE and DARMS) and contemporary analytical applications. The book includes a program library and a large number of illustrations of encodings and analytical results.

Programs of Study

Cogswell College: B. S.

Cogswell Polytechnical College in Cupertino, CA, introduced a B.S. in Music Engineering Technology in 1989. The course work emphasizes signal processing, recording technology, and MIDI applications. Eric Peterson directs the program. Cogswell College is located at 10420 Bubb Road, Cupertino, CA 95014 (408-252-5550),

The Queen's University: M. A.

The Queen's University of Belfast introduced an M.A. in Music and Computing in October 1990. The one-year course is available to students with a first degree in either music or computer science. For the first group it provides an introduction to computer software and for the second an introduction to musicology. Three areas available for detailed study are synthesis and composition, music and artificial intelligence, and historical and analytical research. For further information contact Alan Marsden, Department of Music, The Queen's University, Belfast BT7 1NN, Northern Ireland, UK.

Theses

■ Kemal Ebcioğlu's Ph.D. thesis,"An Expert System for Harmonization of Chorales in the Style of J. S. Bach," is available as Technical Report 86-09 from the Dept. of Computer Science, State University of New York at Buffalo, 226 Bell Hall, Buffalo, NY 14260.

■ Sevan Ficici, in a Master's degree project (Music) at the Eastman School of Music, has been attempting to create non-harmonic tone models for contextual assessment of individual notes in tonal pieces. The programs are in Pascal and run on a Sun workstation. The music (currently Bach chorale harmonizations) is encoded in DARMS and internally represented using Aleck Brinkman's score structure.

■ Simon Holland completed a Ph.D. thesis on "Artificial Intelligence, Education, and Music" at the end of 1989. It is available as Technical Report No. 88 from CITE, The Institute for Educational Technology, The Open University, Milton Keynes, England MK7 6AA.

■ Eric Isaacson (Music) is examining measures (by Forte, Teitelbaum, Morris, Lord, Rahn, Lewin, and the author) of intervallic similarity between pitch-class sets with a view toward showing that the interval content of pitch collections was used by composers to delineate musical structure. He is developing a program in Turbo Pascal that allows users to obtain quickly the value of any measure of similarity applied to any two pitch-class sets. His work is carried out at Indiana University.

■ James Janzen (Music) is seeking to develop a database for folksong classification, retrieval, and analysis at the University of Calgary.

■ Neill Kipp (Computer Science) developed a prototype Standard Music Description Language Processor as his M.S. project at Florida State University in April 1990 [see *Standards* for further information].

■ Christoph Lischka (Mathematics and Computer Science, St. Augustin, Germany), whose long-term objective is the automatic harmonization of Bach chorales, is currently completing a transputer-based implementation of the Boltzmann machine (a specific neural net architecture).

■ R. Wood Massi is currently conducting research for a Ph.D. thesis (Music) on "Computer and Graphic Music: A Semiotic Study of Notation Systems" for submission to the University of California at San Diego. The work concentrates on the ways in which various notations constrain or facilitate musical communication. This consideration extends to languages used in music representation and programming (Music V, DARMS, MIDI, et al.) as well as theories from linguistics, semiotics, cybernetics, and other disciplines.

■ James Rhodes (Computer Science) is developing music-analytical applications within the framework of an expert system, the General System Problem Solver formulated by George J. Klir. Rhodes' specific work concerns the abstract systematic properties of dissonance resolution in four-voice works from the past five centuries. He uses the *Shannon entropy* for the purpose of determining overall consistency of dissonance resolution, and *join procedures* as a means of determining the strength of association among various parts of a musical system. The work was begun as part of a project for the degree of M.Sc. at the State University of New York at Binghamton. GSPS software is available there and at Cornell University.

■ Peer Sitter completed a *Staatsexamensarbeit* entitled "MIDI in der Musikanalyse: Einführung in Theoretische Perspektiven" [MIDI in Musical Analysis: Introduction to Theoretical Perspectives] at the University of Wuppertal in 1988. His work examines the advantages and disadvantages of MIDI code for musicological applications and proposes controller messages to compensate for some of the latter.

■ Janet Owens Thomas is creating a group of programs to generate music algorithmically from fractals as a research project for the M.Sc. in Music Technology at York University.

■ Wolfgang Vonolfen (Mathematics and Computer Science, St. Augustin, Germany) is using neural nets (in Objectworks) to optimize score layout as part of a Ph.D. thesis.

■ Stephen Wu (Computer Science) is working toward the goal of automatic arrangement of popular song melodies. He has been developing a deterministic algorithm for rhythmic segmentation of melodies and plans soon to develop an algorithm for chordal accompaniment. His research is carried out at the University of Hong Kong. Further details are given on p. 115.

Humanities Computing Initiatives and Publications

Computers in Literature

Computers in Literature is the newsletter (ISSN 0958-7381) of the Computers in Teaching Initiative Centre for Literary and Linguistic Studies at Oxford University. It carries brief reports on many activities related to the encoding and processing of academic texts. For further information send a note to CTILIT@VAX.OX.AC.UK.

History and Computing

History and Computing is the new journal of the Association for History and Computing. It is edited by R. J. Morris (Dept. of Economic and Social History, William Robertson Building, George Square, Edinburgh EH8 9JY, Scotland) and published by Oxford University Press. Its areas of concern include quantitative methods, free text analysis, image processing, and graphical presentation.

Humanities Computing Yearbook

The second *Humanities Computing Yearbook*, for 1988, was scheduled for publication by Oxford University Press in 1990. The yearbook provides an annotated survey of current publications, research activities, software, and hardware relevant to humanities teaching and research. The contribution on music was compiled by Lelio Camilleri and Eleanor Selfridge-Field. *HCY 2* is edited by Ian Lancashire at the Center for Computing in the Humanities at the University of Toronto.

Journal of Computer Assisted Learning

The quarterly *Journal of Computer Assisted Learning* is now in its sixth year of publication. The editor is R. Lewis (ESRC, Department of Psychology, University of Lancaster LA1 4YE, UK). *JCAL* considers topics in expert systems, human-computer interfaces, and the psychology of learning in relation to classroom teaching and educational policy. It is available from Blackwell Scientific Publications.

National Center for Machine-Readable Texts

The establishment of a Center for Machine-Readable Texts in the Humanities serving the United States, Canada, and Mexico was discussed at an invited conference jointly sponsored by Rutgers and Princeton Universities in March 1990. Among the Center's functions would be the maintenance of an inventory of machine-readable texts to be made available through the Research Libraries Information Network (RLIN) and the establishment of an archiving service. Eleanor Selfridge-Field was present as a representative of CCARH. There was no discussion of machine-readable musical sources nor of multimedia sources in other disciplines.

Rutgers and Princeton have subsequently agreed to provide start-up funding for the Center. Further information is available from Marianne Gaunt, Associate University Librarian, Rutgers University, New Brunswick, NJ 08903, and Robert Hollander, Director, Italian Studies, Princeton University, Princeton, NJ 08544 (bobh@phoenix.princeton.edu).

Oxford Text Archives

The Oxford Text Archives, founded in 1976, offers long-term storage and maintenance of electronic versions of scholarly texts. Materials may be used for private study only but are easily available for a small fee on diskette, tape, or cartridge, depending on the length of the source and the medium desired. Among items listed in the latest catalogue are the *Oxford Dictionary of Music* (U-592-E), the King James (U-1060-E) and Revised Standard Version (U-1061-E) of the Bible, *Das Nibelungenlied* (U-202-B), and a corpus of Latvian folksong texts (U-287-B). For further information

contact Lou Burnard, OTA, 13 Banbury Road, Oxford OX2 6NN (archive@vax.ox.ac.uk).

Oxford Text Searching System

The Oxford Text Searching System is designed to make set texts for undergraduate study in English, ancient, medieval, and modern languages and literature, and theology available for online searching. It is associated with the newly formed Centre for Humanities Computing. The texts used are principally those held by the Oxford Text Archives [see above]. Software support for searching and for the preparation of concordances and indices is available. Enquiries may be directed to Susan Hockey (SUSAN@VAX.AC.UK).

Scholarship and Technology in the Humanities

An invited international conference on Scholarship and Technology in the Humanities, convened by J. M. Smedhurst, head of the British Library, was held at Elvetham Hall, UK, from May 9 through 12. Consideration of the prospects for each discipline over the next decade was given in a series of prepared talks. Walter B. Hewlett represented the Center for Computer Assisted Research in the Humanities.